

K 3195.txt  
SEQUENCE LISTING

<110> Deutsches Krebsforschungszentrum Stiftung des öffentlichen  
Rechts  
Niehrs, Christof  
Wu, Wei  
Glinka, Andrei  
Kazanskay, Olga

<120> Compositions for diagnosis and therapy of diseases associated  
with aberrant expression of Futrins (R-spondins)

<130> K 3195

<140> PCT/EP 2004/011269  
<141> 2004-10-08

<150> EP 03 023 000.7  
<151> 2003-10-10

<160> 32

<170> PatentIn version 3.2

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tgccaaggag	gctgtgcaac	atgctcagat	tacaatggat	gtttgtcatg	taagcccaga	180
ctattttttg	ctctggaaag	aattggcatg	aagcagattg	gagtatgtct	ctcttcatgt	240
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caccttgga	agtgccttga	caattgccca	gaagggttgg	aagccaacaa	ccatactatg	420
gagtgtgtca	gtattgtgca	ctgtgaggtc	agtgaatgga	atccttggag	tccatgcacg	480
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cagcatcctt	cagcaaaggg	taacctgtgt	cccccaacaa	atgagacaag	aaagtgtaca	600
gtgcaaagga	agaagtgtca	gaaggggagaa	cgaggaaaaa	aaggaagggga	gaggaaaaga	660
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agacactgcc ctggaggaaa gagaactaca aagaagaagg acaagaggaa caagaagaag 660  
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 <212> PRT  
 <213> Homo sapiens

<400> 25

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Leu Thr Ile Ser Ser Arg Gly Ile Lys Gly Lys Arg Gln Arg Arg Ile  
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Ser Ala Glu Gly Ser Gln Ala Cys Ala Lys Gly Cys Glu Leu Cys Ser  
 35 40 45

Glu Val Asn Gly Cys Leu Lys Cys Ser Pro Lys Leu Phe Ile Leu Leu  
 50 55 60

Glu Arg Asn Asp Ile Arg Gln Val Gly Val Cys Leu Pro Ser Cys Pro  
 65 70 75 80

Pro Gly Tyr Phe Asp Ala Arg Asn Pro Asp Met Asn Lys Cys Ile Cys  
 85 90 95

Lys Ile Glu His Cys Glu Ala Cys Phe Ser His Asn Phe Cys Thr Lys  
 100 105 110

Cys Lys Glu Gly Leu Tyr Leu His Lys Gly Arg Cys Tyr Pro Ala Cys  
 115 120 125

Pro Glu Gly Ser Ser Ala Ala Asn Gly Thr Met Glu Cys Ser Ser Pro  
 130 135 140

Ala Gln Cys Glu Met Ser Glu Trp Ser Pro Trp Gly Pro Cys Ser Lys  
 145 150 155 160

Lys Gln Gln Leu Cys Gly Phe Arg Arg Gly Ser Glu Glu Arg Thr Arg  
 165 170 175

Arg Val Leu His Ala Pro Val Gly Asp His Ala Ala Cys Ser Asp Thr  
 180 185 190

Lys Glu Thr Arg Arg Cys Thr Val Arg Arg Val Pro Cys Pro Glu Gly  
 195 200 205

Gln Lys Arg Arg Lys Gly Gly Gln Gly Arg Arg Glu Asn Ala Asn Arg  
 210 215 220

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Asn Leu Ala Arg Lys Glu Ser Lys Glu Ala Gly Ala Gly Ser Arg Arg  
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Arg Lys Gly Gln Gln Gln Gln Gln Gln Gly Thr Val Gly Pro Leu  
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Thr Ser Ala Gly Pro Ala  
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<210> 26  
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20 25 30

Ser Tyr Val Ser Asn Pro Ile Cys Lys Gly Cys Leu Ser Cys Ser Lys  
35 40 45

Asp Asn Gly Cys Ser Arg Cys Gln Gln Lys Leu Phe Phe Phe Leu Arg  
50 55 60

Arg Glu Gly Met Arg Gln Tyr Gly Glu Cys Leu His Ser Cys Pro Ser  
65 70 75 80

Gly Tyr Tyr Gly His Arg Ala Pro Asp Met Asn Arg Cys Ala Arg Cys  
85 90 95

Arg Ile Glu Asn Cys Asp Ser Cys Phe Ser Lys Asp Phe Cys Thr Lys  
100 105 110

Cys Lys Val Gly Phe Tyr Leu His Arg Gly Arg Ser Phe Asp Glu Cys  
115 120 125

Pro Asp Gly Phe Ala Pro Leu Glu Glu Thr Met Glu Cys Val Glu Gly  
130 135 140

Cys Glu Val Gly His Trp Ser Glu Trp Gly Thr Cys Ser Arg Asn Asn  
145 150 155 160

Arg Thr Cys Gly Phe Lys Trp Gly Leu Glu Thr Arg Thr Arg Gln Ile  
165 170 175

Val Lys Lys Pro Val Lys Asp Thr Ile Pro Cys Pro Thr Ile Ala Glu  
180 185 190



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Ser Arg Arg Cys Lys Met Thr Met Arg His Cys Pro Gly Gly Lys Arg  
195 200 205

Thr Pro Lys Ala Lys Glu Lys Arg Asn Lys Lys Lys Lys Arg Lys Leu  
210 215 220

Ile Glu Arg Ala Gln Glu Gly His Ser Val Phe Leu Ala Thr Asp Arg  
225 230 235 240

Ala Asn Gln

<210> 27  
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<212> PRT  
<213> Homo sapiens

<400> 27

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Glu Tyr Ile Gly Ser Gln Asn Ala Ser Arg Gly Arg Arg Gln Arg Arg  
20 25 30

Met His Pro Asn Val Ser Gln Gly Cys Gln Gly Gly Cys Ala Thr Cys  
35 40 45

Ser Asp Tyr Asn Gly Cys Leu Ser Cys Lys Pro Arg Leu Phe Phe Ala  
50 55 60

Leu Glu Arg Ile Gly Met Lys Gln Ile Gly Val Cys Leu Ser Ser Cys  
65 70 75 80

Pro Ser Gly Tyr Tyr Gly Thr Arg Tyr Pro Asp Ile Asn Lys Cys Thr  
85 90 95

Lys Cys Lys Ala Asp Cys Asp Thr Cys Phe Asn Lys Asn Phe Cys Thr  
100 105 110

Lys Cys Lys Ser Gly Phe Tyr Leu His Leu Gly Lys Cys Leu Asp Asn  
115 120 125

Cys Pro Glu Gly Leu Glu Ala Asn Asn His Thr Met Glu Cys Val Ser  
130 135 140

Ile Val His Cys Glu Val Ser Glu Trp Asn Pro Trp Ser Pro Cys Thr  
145 150 155 160

Lys Lys Gly Lys Thr Cys Gly Phe Lys Arg Gly Thr Glu Thr Arg Val  
165 170 175

Arg Glu Ile Ile Gln His Pro Ser Ala Lys Gly Asn Leu Cys Pro Pro  
 180 185 190

Thr Asn Glu Thr Arg Lys Cys Thr Val Gln Arg Lys Lys Cys Gln Lys  
 195 200 205

Gly Glu Arg Gly Lys Lys Gly Arg Glu Arg Lys Arg Lys Lys Pro Asn  
 210 215 220

Lys Gly Glu Ser Lys Glu Ala Ile Pro Asp Ser Lys Ser Leu Glu Ser  
 225 230 235 240

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Arg Lys Val Gln Asp Lys Gln Lys Ser Val Ser Val Ser Thr Val His  
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 <212> PRT  
 <213> Homo sapiens

<400> 28

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Met Leu Ala Leu Asn Arg Arg Lys Lys Gln Val Gly Thr Gly Leu Gly  
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Gly Asn Cys Thr Gly Cys Ile Ile Cys Ser Glu Glu Asn Gly Cys Ser  
 35 40 45

Thr Cys Gln Gln Arg Leu Phe Leu Phe Ile Arg Arg Glu Gly Ile Arg  
 50 55 60

Gln Tyr Gly Lys Cys Leu His Asp Cys Pro Pro Gly Tyr Phe Gly Ile  
 65 70 75 80

Arg Gly Gln Glu Val Asn Arg Cys Lys Lys Cys Gly Ala Thr Cys Glu  
 85 90 95

Ser Cys Phe Ser Gln Asp Phe Cys Ile Arg Cys Lys Arg Gln Phe Tyr  
 100 105 110

Leu Tyr Lys Gly Lys Cys Leu Pro Thr Cys Pro Pro Gly Thr Leu Ala  
 115 120 125

His Gln Asn Thr Arg Glu Cys Gln Gly Glu Cys Glu Leu Gly Pro Trp  
 130 135 140

Gly Gly Trp Ser Pro Cys Thr His Asn Gly Lys Thr Cys Gly Ser Ala  
 145 150 155 160 165 170 175 180 185 190 195 200

145 150 160

Trp Gly Leu Glu Ser Arg Val Arg Glu Ala Gly Arg Ala Gly His Glu  
165 170 175

Glu Ala Ala Thr Cys Gln Val Leu Ser Glu Ser Arg Lys Cys Pro Ile  
180 185 190

Gln Arg Pro Cys Pro Gly Glu Arg Ser Pro Gly Gln Lys Lys Gly Arg  
195 200 205

Lys Asp Arg Arg Pro Arg Lys Asp Arg Lys Leu Asp Arg Arg Leu Asp  
210 215 220

<210> 29  
<211> 262  
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<213> Homo sapiens

<400> 29

Met Arg Leu Gly Leu Cys Val Val Ala Leu Val Leu Ser Trp Thr His  
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Leu Thr Ile Ser Ser Arg Gly Ile Lys Gly Lys Arg Gln Arg Arg Ile  
20 25 30

Ser Ala Glu Gly Ser Gln Ala Cys Ala Lys Gly Cys Glu Leu Cys Ser  
35 40 45

Glu Val Asn Gly Cys Leu Lys Cys Ser Pro Lys Leu Phe Ile Leu Leu  
50 55 60

Glu Arg Asn Asp Ile Arg Gln Val Gly Val Cys Leu Pro Ser Cys Pro  
65 70 75 80

Pro Gly Tyr Phe Asp Ala Arg Asn Pro Asp Met Asn Lys Cys Ile Cys  
85 90 95

Lys Ile Glu His Cys Glu Ala Cys Phe Ser His Asn Phe Cys Thr Lys  
100 105 110

Cys Lys Glu Gly Leu Tyr Leu His Lys Gly Arg Cys Tyr Pro Ala Cys  
115 120 125

Pro Glu Gly Ser Ser Ala Ala Asn Gly Thr Met Glu Cys Ser Ser Pro  
130 135 140

Ala Gln Cys Glu Met Ser Glu Trp Ser Pro Trp Gly Pro Cys Ser Lys  
145 150 155 160

Lys Gln Gln Leu Cys Gly Phe Arg Arg Gly Ser Glu Glu Arg Thr Arg  
165 170 175

Arg Val Leu His Ala Pro Val Gly Asp His Ala Ala Cys Ser Asp Thr  
 180 185 190  
 Lys Glu Thr Arg Arg Cys Thr Val Arg Arg Val Pro Cys Pro Glu Gly  
 195 200 205  
 Gln Lys Arg Arg Lys Gly Gly Gln Gly Arg Arg Glu Asn Ala Asn Arg  
 210 215 220  
 Asn Leu Ala Arg Lys Glu Ser Lys Glu Ala Gly Ala Gly Ser Arg Arg  
 225 230 235 240  
 Arg Lys Gly Gln Gln Gln Gln Gln Gln Gly Thr Val Gly Pro Leu  
 245 250 255  
 Thr Ser Ala Gly Pro Ala  
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<210> 30  
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 <212> PRT  
 <213> Homo sapiens  
 <400> 30

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 Ser Tyr Val Ser Asn Pro Ile Cys Lys Gly Cys Leu Ser Cys Ser Lys  
 35 40 45  
 Asp Asn Gly Cys Ser Arg Cys Gln Gln Lys Leu Phe Phe Phe Leu Arg  
 50 55 60  
 Arg Glu Gly Met Arg Gln Tyr Gly Glu Cys Leu His Ser Cys Pro Ser  
 65 70 75 80  
 Gly Tyr Tyr Gly His Arg Ala Pro Asp Met Asn Arg Cys Ala Arg Cys  
 85 90 95  
 Arg Ile Glu Asn Cys Asp Ser Cys Phe Ser Lys Asp Phe Cys Thr Lys  
 100 105 110  
 Cys Lys Val Gly Phe Tyr Leu His Arg Gly Arg Ser Phe Asp Glu Cys  
 115 120 125  
 Pro Asp Gly Phe Ala Pro Leu Glu Glu Thr Met Glu Cys Val Glu Gly  
 130 135 140

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Cys Glu Val Gly His Trp Ser Glu Trp Gly Thr Cys Ser Arg Asn Asn  
145 150 155 160

Arg Thr Cys Gly Phe Lys Trp Gly Leu Glu Thr Arg Thr Arg Gln Ile  
165 170 175

Val Lys Lys Pro Val Lys Asp Thr Ile Pro Cys Pro Thr Ile Ala Glu  
180 185 190

Ser Arg Arg Cys Lys Met Thr Met Arg His Cys Pro Gly Gly Lys Arg  
195 200 205

Thr Pro Lys Ala Lys Glu Lys Arg Asn Lys Lys Lys Lys Arg Lys Leu  
210 215 220

Ile Glu Arg Ala Gln Glu Gly His Ser Val Phe Leu Ala Thr Asp Arg  
225 230 235 240

Ala Asn Gln

<210> 31  
<211> 272  
<212> PRT  
<213> Homo sapiens

<400> 31

Met His Leu Arg Leu Ile Ser Trp Leu Phe Ile Ile Leu Asn Phe Met  
1 5 10 15

Glu Tyr Ile Gly Ser Gln Asn Ala Ser Arg Gly Arg Arg Gln Arg Arg  
20 25 30

Met His Pro Asn Val Ser Gln Gly Cys Gln Gly Gly Cys Ala Thr Cys  
35 40 45

Ser Asp Tyr Asn Gly Cys Leu Ser Cys Lys Pro Arg Leu Phe Phe Ala  
50 55 60

Leu Glu Arg Ile Gly Met Lys Gln Ile Gly Val Cys Leu Ser Ser Cys  
65 70 75 80

Pro Ser Gly Tyr Tyr Gly Thr Arg Tyr Pro Asp Ile Asn Lys Cys Thr  
85 90 95

Lys Cys Lys Ala Asp Cys Asp Thr Cys Phe Asn Lys Asn Phe Cys Thr  
100 105 110

Lys Cys Lys Ser Gly Phe Tyr Leu His Leu Gly Lys Cys Leu Asp Asn  
115 120 125

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Cys Pro Glu Gly Leu Glu Ala Asn Asn His Thr Met Glu Cys Val Ser  
130 135 140

Ile Val His Cys Glu Val Ser Glu Trp Asn Pro Trp Ser Pro Cys Thr  
145 150 155 160

Lys Lys Gly Lys Thr Cys Gly Phe Lys Arg Gly Thr Glu Thr Arg Val  
165 170 175

Arg Glu Ile Ile Gln His Pro Ser Ala Lys Gly Asn Leu Cys Pro Pro  
180 185 190

Thr Asn Glu Thr Arg Lys Cys Thr Val Gln Arg Lys Lys Cys Gln Lys  
195 200 205

Gly Glu Arg Gly Lys Lys Gly Arg Glu Arg Lys Arg Lys Lys Pro Asn  
210 215 220

Lys Gly Glu Ser Lys Glu Ala Ile Pro Asp Ser Lys Ser Leu Glu Ser  
225 230 235 240

Ser Lys Glu Ile Pro Glu Gln Arg Glu Asn Lys Gln Gln Gln Lys Lys  
245 250 255

Arg Lys Val Gln Asp Lys Gln Lys Ser Val Ser Val Ser Thr Val His  
260 265 270

<210> 32  
<211> 224  
<212> PRT  
<213> Homo sapiens

<400> 32

Met Arg Ala Pro Leu Cys Leu Leu Leu Leu Val Ala His Ala Val Asp  
1 5 10 15

Met Leu Ala Leu Asn Arg Arg Lys Lys Gln Val Gly Thr Gly Leu Gly  
20 25 30

Gly Asn Cys Thr Gly Cys Ile Ile Cys Ser Glu Glu Asn Gly Cys Ser  
35 40 45

Thr Cys Gln Gln Arg Leu Phe Leu Phe Ile Arg Arg Glu Gly Ile Arg  
50 55 60

Gln Tyr Gly Lys Cys Leu His Asp Cys Pro Pro Gly Tyr Phe Gly Ile  
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85 90 95

Ser Cys Phe Ser Gln Asp Phe Cys Ile Arg Cys Lys Arg Gln Phe Tyr  
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100

105

110

Leu Tyr Lys Gly Lys Cys Leu Pro Thr Cys Pro Pro Gly Thr Leu Ala  
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 His Gln Asn Thr Arg Glu Cys Gln Gly Glu Cys Glu Leu Gly Pro Trp  
 130 135 140  
 Gly Gly Trp Ser Pro Cys Thr His Asn Gly Lys Thr Cys Gly Ser Ala  
 145 150 155 160  
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 165 170 175  
 Glu Ala Ala Thr Cys Gln Val Leu Ser Glu Ser Arg Lys Cys Pro Ile  
 180 185 190  
 Gln Arg Pro Cys Pro Gly Glu Arg Ser Pro Gly Gln Lys Lys Gly Arg  
 195 200 205  
 Lys Asp Arg Arg Pro Arg Lys Asp Arg Lys Leu Asp Arg Arg Leu Asp  
 210 215 220